TEXAS A&M AGRILIFE EXTENSION

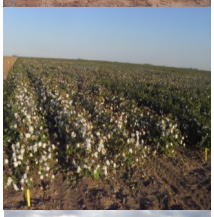
The Angelo Agronomist

October 2015

2015 Cotton Harvest Aids Summary

Inside this issue:

Tom Green Co Irrigated 7 day



Plant had blooms in the top nodes indicating that they still had soil moisture. Overall plants were compact and well managed.

- The Ginstar and Adios treatments averaged 30% defoliation, typical of 7 days after treatment. Addition of 8 fl oz of Finish 6 Pro appeared to improve performance compared to ethephon alone. Ginstar treatments with the proprietary ingredient and an EC formulation scored better than the Adios or SC formulation of "Dropp" and diuron.
- The PPO treatments were all similar with 15 and 20 percent defoliated. Sharpen appeared slightly better but is higher cost. ETX was not evaluated in this trial
- The traditional Folex and ethephon treatment performed midway between the Ginstar and PPO treatments
- Of the two "kitchen sink" mixes Ginstar and Finish performed better than the Folex mix.

Tom Green Co Irrigated 14 day

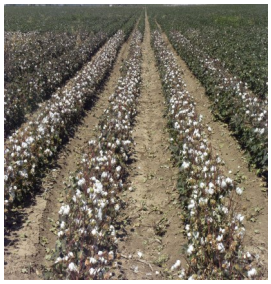
Plant had blooms in the top nodes indicating that they still had soil moisture. Overall plants were compact and well managed.

- The Ginstar and Adios treatments averaged 65% defoliation, a little lower than expected 14 days after treatment. Addition of 8 fl oz of Finish 6 Pro appeared to improve performance compared to ethephon alone or Finish 6 alone but this may have been just a factor of the field. Ginstar treatments with the proprietary ingredient and an EC formulation scored better than the Adios SC formulation of "Dropp" and diuron.
- The PPO treatments were all similar with 20 to 30 percent defoliated. Aim and Sharpen appeared slightly better for defoliation but were a tick below Display on regrowth. ETX the other PPO on the market was not evaluated in this trial
- The traditional Folex and ethephon treatment performed midway between the Ginstar and PPO treatments
- Of the two "kitchen sink" mixes Ginstar, Finish, Gramoxone performed better than the Folex , Gramoxone mix.

Runnels Co Dryland 7 day

Crop condition was near maturity and not actively growing but not severely stressed, having received a light rain shower a couple of weeks previously. Warm dry weather facilitated harvest aid performance and crop maturity.

- Boll opener products (ethephon and Finish Pro 6) improved percent open from 75-80 to 90-95.
- All Ginstar and Adios treatments were excellent with similar results and a slight increase in performance with Finish Pro 6 over using ethephon.
- Among the PPO treatments with ethephon, defoliation was good with slight differences between products. Sharpen defoliated the best with and without ethephon. The Sharpen alone treatment may be an alternative to Gramoxone.
- The Folex applications performed as well as the other products. Replacing 16 fl oz of ethephon with 8 fl oz of Finish Pro 6 increase boll opening but not defoliation after 7 days.
- 3 and 6 fl oz of Gramoxone SL (2lb) with ethephon defoliated well (65 and 75%) with 15-20% green leaf. Conditions must have been right as this treatment varies by location and timing.
- The higher rate, 16 fl oz of Gramoxone SL (2lb); treatments without ethephon had about 30 - 50% defoliation with 5-10% green leaf. The addition of AMS showed some increased defoliation.



San Angelo, TX Sept. 8, 2011

Four row treatments: Ginstar, center; Def & Prep, back left; Finish alone, back right.

Runnels Co Dryland 14 day

- All Ginstar and Adios treatments were excellent with no regrowth
- Among the PPO treatments with ethephon, defoliation was good with only slight differences. Aim and Display had the lowest regrowth followed significantly by Sharpen and ETX. The 0.75 fl oz application of Sharpen without ethephon; performed well with little regrowth.
- The Folex applications had slightly lower defoliation performance with noticeably more regrowth in both treatments. The Folex with Finish Pro 6 had much less regrowth.
- 3 and 6 fl oz of Gramoxone SL (2lb) with ethephon defoliated well, 90%; but regrowth was an issue.
- The higher rate, 16 fl oz of Gramoxone SL (2lb); treatments without ethephon had about 30% defoliation. The additions of AMS and diruon showed some increased defoliation and reduced plant regrowth.

Summaries continued on page 12.

2015 Harvest Aid Evaluation Tom Green Co - Irrigated

Trt	Treatment	Rate	Rate	Total Product Price/acre	7 Day			14 Day			
No.	Name		Unit		% Def	% DES	% GL	% Def	% DES	% GL	% Regrowth
1	Ginstar	4	fl oz/a	$7.91	30	15	55	65	15	20	30
1	Ethephon	16	fl oz/a								
1	Non-Ionic Surfactant	0.25	% v/v								
2	Ginstar	5	fl oz/a	$9.10	30	15	55	60	15	25	50
2	Ethephon	16	fl oz/a								
2	Non-Ionic Surfactant	0.25	% v/v								
3	Ginstar	6	fl oz/a	$10.30	35	15	50	70	20	10	30
3	Ethephon	16	fl oz/a								
3	Non-Ionic Surfactant	0.25	% v/v								
4	Ginstar	5	fl oz/a	$15.41	35	15	50	60	15	25	50
4	Finish 6 Pro	16	fl oz/a								
4	Non-Ionic Surfactant	0.25	% v/v								
5	Ginstar	5	fl oz/a	$12.26	35	15	50	65	15	20	30
5	Ethephon	8	fl oz/a								
5	Finish 6 Pro	8	fl oz/a								
5	Non-Ionic Surfactant	0.25	% v/v								
6	Adios	4	fl oz/a	$6.31	25	10	65	50	15	35	30
6	Ethephon	16	fl oz/a								
6	Non-Ionic Surfactant	0.25	% v/v								
7	AIM	1	fl oz/a	$5.40	15	20	65	30	30	40	70
7	Ethephon	16	fl oz/a								
7	Crop Oil Concentrate	1	% v/v								
8	Display	0.8	fl oz/a	$5.94	15	25	60	20	30	50	60
8	Ethephon	16	fl oz/a								
8	Crop Oil Concentrate	1	% v/v								
9	Sharpen	1	fl oz/a	$10.00	20	20	60	25	35	40	70
9	Ethephon	16	fl oz/a								
9	MSO	1	% v/v								
9	Request	0.5	% v/v								
10	Ethephon	16	fl oz/a	$11.56	20	20	60	45	15	40	70
10	Folex	16	fl oz/a								
10	Non-Ionic Surfactant	0.25	% v/v								
11	Gramoxone "3"	4	fl oz/a	$9.66	10	55	35	15	70	15	90
11	Folex	8	fl oz/a								
11	Ethephon	16	fl oz/a								
11	Crop Oil Concentrate	1	% v/v								
12	Ginstar	3	fl oz/a	$10.57	20	40	40	40	30	30	70
12	Gramoxone "3"	3	fl oz/a								
12	Ethephon	8	fl oz/a								
12	Finish	8	fl oz/a								
12	Non-Ionic Surfactant	1	% v/v								

2015 Harvest Aid Evaluation Tom Green Co Irrigated

Application Information		DAILY TEMPERATURES			
Application Dates:	9/24/2015	Date	Low	High	GDD 60
App. Code A:		9/23/2015	67	92	0
		9/24/2015	66	90	18
Cooperator:	Doug Wilde	9/25/2015	70	93	21.5
GPS Coor. 31° 26' 13.71" N, 100° 22' 22.72" W	Outside East Loop 306	9/26/2015	58	92	15
		9/27/2015	60	91	15.5
Variety:	FM 2334 B2RF	9/28/2015	58	90	14
Time:	5:45-6:15 pm	9/29/2015	57	90	13.5
Temp (°F):	86	9/30/2015	59	92	15.5
% RH:	37%	10/1/2015	62	95	18.5
Wind Speed (mph) & Direction	5 mph out of East	10/2/2015	58	85	11.5
		10/3/2015	58	85	11.5
Row Spacing("):	40"	10/4/2015	60	80	10
Plot width (rows)	4	10/5/2015	63	83	13
Plot length	120 feet	10/6/2015	51	87	9
		10/7/2015	57	88	12.5
% Open	80%	10/8/2015	65	82	13.5
Plant Height (mean inches)	20-30"	10/9/2015	65	79	12
				Total	164.5
Sprayer Information	Spider Sprayer	Rain			
	11 gpa / 11002 Turbo Teejet	10/8/2015	0.9		
	32 psi	10/9/2015	0.9		
	4 mph	Total	1.9	inches	

2015 Harvest Aid Evaluation Runnels Co - Dryland

Trt	Treatment	Rate	Rate	Total Product Price/acre	7d Sept. 23, 2015				14d Sept. 30, 2015			
No.	Name		Unit		% Def	% DES	% GL	% OPEN	% Def	% DES	% GL	% Regrowth
1	Ginstar	4	fl oz/a	$7.91	60	15	25	90	97.5	2.5	0	0
1	Ethephon	16	fl oz/a									
1	Non-Ionic Surfactant	0.25	% v/v									
2	Ginstar	6	fl oz/a	$10.30	65	15	20	90	97.5	2.5	0	0
2	Ethephon	16	fl oz/a									
2	Non-Ionic Surfactant	0.25	% v/v									
3	Adios	4	fl oz/a	$6.31	60	15	25	90	97.5	2.5	0	0
3	Ethephon	16	fl oz/a									
3	Non-Ionic Surfactant	0.25	% v/v									
4	Adios	6	fl oz/a	$7.91	55	15	30	90	97.5	2.5	0	0
4	Ethephon	16	fl oz/a									
4	Non-Ionic Surfactant	0.25	% v/v									
5	Ginstar	4	fl oz/a	9.81	70	10	20	90	97.5	2.5	0	0
5	Finish	8	fl oz/a									
5	Non-Ionic Surfactant	0.25	% v/v									
6	Adios	4	fl oz/a	$8.22	75	5	20	90	97.5	2.5	0	0
6	Finish	8	fl oz/a									
6	Non-Ionic Surfactant	0.25	% v/v									
7	Display	0.6	fl oz/a	$5.58	70	10	20	95	87.5	5	7.5	20
7	Ethephon	16	fl oz/a									
7	Crop Oil Concentrate	1	% v/v									
8	ETX	1.25	fl oz/a	$6.97	75	10	15	95	92.5	2.5	5	60
8	Ethephon	16	fl oz/a									
8	Crop Oil Concentrate	0.5	% v/v									
9	Aim	1	fl oz/a	$5.40	75	10	15	95	90	5	5	20
9	Ethephon	16	fl oz/a									
9	Crop Oil Concentrate	1	% v/v									
10	Sharpen	0.75	fl oz/a	$7.83	95	5	5	95	95	2.5	2.5	50
10	Ethephon	16	fl oz/a									
10	Ams	1.7	lb/a									
10	MSO	0.5	% v/v									
11	Sharpen	0.75	fl oz/a	$5.33	80	10	10	75	92.5	5	2.5	10
11	Ams	1.7	lbs/ac									
11	MSO	0.5	% v/v									
12	Ethephon	16	fl oz/a	11.56	90	5	5	90	90	5	5	70
12	Folex	16	fl oz/a									
12	Non-Ionic Surfactant	0.25	% v/v									
13	Finish	8	fl oz/a	$13.47	75	15	10	95	85	10	5	30
13	Folex	16	fl oz/a									
13	Non-Ionic Surfactant	0.25	% v/v									
14	Gramoxone SL	3	fl oz/a	$4.99	65	15	20	90	90	0	10	60
14	Ethephon	16	fl oz/a									
14	Crop Oil Concentrate	1	% v/v									
15	Gramoxone SL	6	fl oz/a	$5.48	75	10	15	90	90	5	5	60
15	Ethephon	16	fl oz/a									
15	Crop Oil Concentrate	1	% v/v									
16	Gramoxone SL	16	fl oz/a	$5.15	50	40	10	85	50	50	0	20
16	Ams	1	fl oz/a									
16	Crop Oil Concentrate	1	% v/v									
17	Gramoxone SL	16	fl oz/a	$4.62	30	65	5	90	30	70	0	30
17	Crop Oil Concentrate	1	% v/v									
18	Gramoxone SL	16	fl oz/a	$4.70	30	65	5	90	30	70	0	0
18	Direx	0.5	fl oz/a									
18	Crop Oil Concentrate	1	% v/v									

Runnels Co Dry

Application Information	
Application Dates:	9/16/2015
App. Code A:	
Cooperator:	Paul Minzenmayer
GPS Coor. 31° 59' 14" N, 100° 3' 19" W	
Variety:	ST 4946 GLB2
Time:	11:00 am to 2:30 pm
Temp (^{0}F):	92
% RH:	
Wind Speed (mph) & Direction	7-9 mph out of southeast 159°
Row Spacing("):	36"
Plot width (rows)	4
Plot length	Strips 100 feet
% Open	50%
Plant Height (mean inches)	24-30"
Sprayer Information	Spider Sprayer
	10 gpa / 8002 Turbo Teejet
	32 psi
	4 mph

Daily Temperatures

Date	High	GDD 60
9/16/15	95	22.5
9/17/15	95	22.5
9/18/15	96	24
9/19/15	98	24.5
9/20/15	96	24
9/21/15	90	20
9/22/15	100	21
9/23/15	97	21
9/24/15	96	21
9/25/15	97	23
9/26/15	101	21
9/27/15	103	21.5
9/28/15	96	19.5
9/29/15	59	17
	Total	178
Rain		
9/20/15		
9/26/15		
Total	Inches	

2015 Harvest Aid Evaluation Glasscock Co - Dryland

Trt	Treatment	Rate	Rate	Total Product Price/acre	Sept. 8, 2015			Sept. 15, 2015				
No.	Name		Unit		% Def	% DES	% GL	% Def	% DES	% GL	% Regrowth	% open
1	Ginstar	4	fl oz/a	$7.91				55	25	20	40	95
1	Ethephon	16	fl oz/a									
1	Non-Ionic Surfactant	0.25	% v/v									
2	Ginstar	4	fl oz/a	$10.41				65	15	10	40	95
2	Ethephon	32	fl oz/a									
2	Non-Ionic Surfactant	0.25	% v/v									
3	Adios	4	fl oz/a	$6.31				25	20	55	40	90
3	Ethephon	16	fl oz/a									
3	Non-Ionic Surfactant	0.25	% v/v									
4	Adios	4	fl oz/a	$8.81				25	25	50	40	95
4	Ethephon	32	fl oz/a									
4	Non-Ionic Surfactant	0.25	% v/v									
5	Direx	0.5	fl oz/a	$4.67				10	20	70	40	90
5	Dropp	1	fl oz/a									
5	Ethephon	16	fl oz/a									
5	Non-Ionic Surfactant	0.25	% v/v									
6	Direx	0.5	fl oz/a	$7.79				10	20	70	40	95
6	Dropp	1	fl oz/a									
6	Ethephon	32	fl oz/a									
6	Non-Ionic Surfactant	0.25	% v/v									
7	Display	0.5	fl oz/a	$5.40				5	20	75	50	95
7	Ethephon	16	fl oz/a									
7	Crop Oil Concentrate	1	% v/v									
8	Display	0.5	fl oz/a	$7.90				10	15	75	50	95
8	Ethephon	32	fl oz/a									
8	Crop Oil Concentrate	1	% v/v									
9	Aim	0.25	fl oz/a	$4.72				10	10	80	50	95
9	Ethephon	16	fl oz/a									
9	Crop Oil Concentrate	1	% v/v									
10	Aim	0.25	fl oz/a	$7.22				15	5	80	40	95
10	Ethephon	32	fl oz/a									
10	Crop Oil Concentrate	1	% v/v									
11	Sharpen	0.75	fl oz/a	$5.33				25	0	75	30	95
11	Ams	1.7	lbs/ac									
11	MSO	0.5	% v/v									
12	Finish	16	fl oz/a	$20.38				35	20	45	60	100
12	Ethephon	16	fl oz/a									
12	Folex	16	fl oz/a									
12	Non-Ionic Surfactant	0.25	% v/v									
13	Finish	16	fl oz/a	$21.63				45	20	35	60	100
13	Ethephon	24	fl oz/a									
13	Folex	16	fl oz/a									
13	Non-Ionic Surfactant	0.25	% v/v									
14	Ethephon	16	fl oz/a	$11.56				10	30	60	50	99
14	Folex	16	fl oz/a									
14	Non-Ionic Surfactant	0.25	% v/v									
15	Ethephon	32	fl oz/a	14.06				5	30	65	60	100
15	Folex	16	fl oz/a									
15	Non-Ionic Surfactant	0.25	% v/v									
16	Gramoxone SL	3	fl oz/a	$4.99				5	10	85	60	100
16	Ethephon	16	fl oz/a									
16	Crop Oil Concentrate	1	% v/v									
17	Gramoxone SL	6	fl oz/a	$7.98				5	10	85	50	100
17	Ethephon	32	fl oz/a									
17	Crop Oil Concentrate	1	% v/v									
18	Gramoxone SL	16	fl oz/a	$4.63				50	20	30	70	100
18	Crop Oil Concentrate	1	% v/v									

2015 Harvest Aid Evaluation Glasscock Co Irrigated

Application Information	
Application Dates:	9/1/2015
App. Code A:	
Cooperator:	Chris Matschek
GPS Coor. 31° 43' 17" N, 100° 28' 01" W	St. Lawrence
Variety:	
Time:	5-6:30 pm
Temp (°F):	93
% RH:	
Wind Speed (mph) & Direction	4-6 mph out of South 153°
Row Spacing("):	40"
Plot width (rows)	4
Plot length	Strips 100 feet
% Open	75-80%
Plant Height (mean inches)	24"
Sprayer Information	Spider Sprayer
	10 gpa / 11002 Turbo Teejet
	32 psi
	4 mph

Daily Temperatures

Date	Low	High	Precip.	GDD 60
9/1/2015	92.9	64.1	0	18.5
9/2/2015	93.9	63.9	0	18.9
9/3/2015	94.2	60.6	0	17.4
9/4/2015	95	66.6	0	20.8
9/5/2015	96.2	71.6	0	23.9
9/6/2015	95.2	68.1	0	21.65
9/7/2015	96.6	68.9	0	22.75
9/8/2015	97.8	72.2	0	25
9/9/2015	94	69.6	0	21.8
9/10/2015	93.7	62.1	0	17.9
9/11/2015	93.8	64.4	0	19.1
9/12/2015	88.5	66.6	0	17.55
9/13/2015	93	67.3	0	20.15
9/14/2015	92.3	65.6	0	18.95
9/15/2015	91.7	63.8	0	17.75
			Total:	302.1
Rain Total	0	inches		

2015 Harvest Aid Evaluation Nolan Co - Dryland

Applied in two areas of the field. One (dry) area, turning brown; and another still (green).

Trt	Treatment	Rate	Rate	Total Product Price/acre	7 DAY			14 DAY			
No.	Name		Unit		% Def	% DES	% GL	% Def	% DES	% GL	% Regrowth
1	Ginstar	4	fl oz/a	$7.91	30	15	55	45	10	35	20
1	Ethephon	16	fl oz/a		top scores (green)						
1	Non-Ionic Surfactant	0.25	% v/v		50	10	40	70	10	20	10
2	Ginstar	4	fl oz/a	$9.28	35	15	50	70	10	20	20
2	Ethephon	16	fl oz/a		lower scores (dry)						
2	Crop Oil Concentrate	1	% v/v		35	15	50	55	15	30	10
3	Adios	4	fl oz/a	$6.31	20	20	60	55	15	30	30
3	Ethephon	16	fl oz/a								
3	Non-Ionic Surfactant	0.25	% v/v		35	20	45	45	20	35	20
4	Adios	4	fl oz/a	$7.68	35	15	50	65	10	25	30
4	Ethephon	16	fl oz/a								
4	Crop Oil Concentrate	1	% v/v		35	15	50	50	10	40	20
5	Ginstar	4	fl oz/a	$5.41	5	5	90	30	15	55	20
5	Non-Ionic Surfactant	0.25	% v/v		15	15	70	30	10	60	20
6	Display	0.6	fl oz/a	$5.58	10	45	45	50	20	30	30
6	Ethephon	16	fl oz/a								
6	Crop Oil Concentrate	1	% v/v		35	25	40	60	15	25	30
7	ETX	1.25	fl oz/a	$6.97	30	45	25	75	10	15	35
7	Ethephon	16	fl oz/a								
7	Crop Oil Concentrate	1	% v/v		25	25	50	65	15	20	30
8	Aim	1	fl oz/a	$5.40	30	45	25	50	20	30	30
8	Ethephon	16	fl oz/a								
8	Crop Oil Concentrate	1	% v/v		20	25	55	55	15	30	40
9	Sharpen	0.75	fl oz/a	$7.83	20	55	25	50	30	20	50
9	Ethephon	16	fl oz/a								
9	Ams	1.7	lb/a								
9	MSO	1	% v/v		45	15	40	70	15	15	50
10	Sharpen	0.75	fl oz/a	$5.33	10	65	25	50	40	10	65
10	Ams	1.7	lb/a								
10	MSO	0.5	% v/v		35	35	30	75	15	10	60
11	Ethephon	16	fl oz/a	$11.56	30	10	60	30	10	60	60
11	Folex	16	fl oz/a								
11	Non-Ionic Surfactant	0.25	% v/v		25	10	65	50	10	40	60
12	Aim	1	fl oz/a	$4.18	5	95	0	10	90	0	50
12	Gramoxone SL	16	fl oz/a								
12	Non-Ionic Surfactant	0.25	% v/v		15	75	10	65	25	10	70
13	Gramoxone SL	4	fl oz/a	$2.66	5	30	65	10	30	60	70
13	Crop Oil Concentrate	1	% v/v		10	20	70	60	20	20	90
14	Gramoxone SL	8	fl oz/a	$3.32	10	40	50	20	30	50	70
14	Crop Oil Concentrate	1	% v/v		25	40	35	60	30	10	90
15	Gramoxone SL	16	fl oz/a	$5.14	7.5	77.5	15	25	65	10	75
15	Ams	1.7	fl oz/a								
15	Crop Oil Concentrate	1	% v/v		40	40	20	50	40	10	100
16	Gramoxone SL	16	fl oz/a	$4.62	5	85	10	20	75	5	70
16	Crop Oil Concentrate	1	% v/v		50	40	10	70	20	10	90
17	Gramoxone SL	16	fl oz/a	$4.70	5	90	5	15	85	0	60
17	Direx	0.5	fl oz/a								
17	Crop Oil Concentrate	1	% v/v		35	60	5	50	50	0	50
18	Gramoxone SL	16	fl oz/a	$3.28	5	90	5	15	85	0	65
18	Non-Ionic Surfactant	0.25	% v/v		30	60	10	50	40	10	80

2015 Harvest Aid Evaluation Nolan Co Irrigated

Application Information	
Application Dates:	
App. Code A:	10/7/2015
Cooperator:	Kim Alexander
GPS Coor. 32° 26' 28" N, 100° 33' 1" W	
Variety:	
Time:	11:00 - 3:00 pm
Temp (^{0}F):	92°F
% RH:	
Wind Speed (mph) & Direction	1.6-6.7 mph / East
Row Spacing("):	40"
Plot width (rows)	4
Plot length	Replicated 50 feet
% Open	95-100%
Plant Height (mean inches)	24-30
Sprayer Information	Spider Sprayer
	10 gpa / 8002 Turbo Teejet
	32 psi
	4 mph

Daily Temperatures			
Date	Low	High	GDD 60
10/7/2015	62	87	14.5
10/8/2015	64	82	13.0
10/9/2015	64	82	13.0
10/10/2015	56	90	13.0
10/11/2015	61	98	19.5
10/12/2015	63	91	17.0
10/13/2015	46	98	12.0
10/14/2015	52	98	15.0
10/15/2015	64	96	20.0
10/16/2015	57	82	9.5
10/17/2015	50	88	9.0
10/18/2015	59	84	11.5
10/19/2015	58	76	7.0
10/20/2015	61	81	11.0
		total	185
Rain			
10/7/2015	0.11		
10/8/2015	0.06		
10/9/2015	0.01		
total	0.18	inches	

2015 Harvest Aid Evaluation Howard County - Dryland

Trt No.	Treatment Name	Rate	Rate Unit	Product Price	7 days				14 days			
					% Def	% DES	% GL	% Open Bolls	% Def	% DES	% GL	% Regrowth
1	Ginstar	4	fl oz/a									
1	Ethephon	16	fl oz/a	$7.91	15	25	60	30	30	25	45	40
1	Non-Ionic Surfactant	0.25	% v/v									
2	Ginstar	4	fl oz/a									
2	Ethephon	16	fl oz/a	$9.29	40	15	45	20	80	10	10	30
2	Crop Oil Concentrate	16	fl oz/a									
3	Ginstar	4	fl oz/a									
3	Ethephon	8	fl oz/a	$11.07	35	20	45	30	65	20	15	40
3	Finish 6 Pro	8	fl oz/a									
3	Non-Ionic Surfactant	0.25	% v/v									
4	Adios	4	fl oz/a									
4	Ethephon	16	fl oz/a	$6.31	15	25	60	30	35	20	45	50
4	Non-Ionic Surfactant	0.25	% v/v									
5	Aim	1	fl oz/a									
5	Ethephon	16	fl oz/a	$5.40	5	35	60	20	15	30	55	60
5	Crop Oil Concentrate	1	% v/v									
6	Display	0.6	fl oz/a									
6	Ethephon	16	fl oz/a	$5.58	15	25	60	20	25	25	50	60
6	Crop Oil Concentrate	1	% v/v									
7	ETX	1.25	fl oz/a									
7	Ethephon	16	fl oz/a	$7.97	10	30	60	30	35	25	40	60
7	Crop Oil Concentrate	1	% v/v									
8	Sharpen	0.75	fl oz/a									
8	Ethephon	16	fl oz/a	$7.83	10	30	60	50	30	25	45	80
8	MSO	1	% v/v									
8	Choice	0.5	% v/v									
9	Folex	16	fl oz/a									
9	Ethephon	16	fl oz/a	$11.56	45	15	40	70	60	15	25	100
9	Non-Ionic Surfactant	0.25	% v/v									
10	Gramoxone Inteon (2 lbs/gal)	24	fl oz/a	$5.94	65	15	20	80				
10	Crop Oil Concentrate	1	% v/v						80	10	10	120
11	Gramoxone Inteon (2 lbs/gal)	4.5	fl oz/a									
11	Ethephon	16	fl oz/a	$5.24	0	35	65	40	5	30	65	60
11	Crop Oil Concentrate	1	% v/v									
12	Ginstar	3	fl oz/a									
12	Gramoxone Inteon (2 lbs/gal)	4.5	fl oz/a									
12	Ethephon	8	fl oz/a	$10.61	35	20	45	30	50	15	35	60
12	Finish 6 Pro	8	fl oz/a									
12	Non-Ionic Surfactant	1	% v/v									

2015 Harvest Aid Evaluation Howard Count - Dryland

Application Information	
Application Dates:	
App. Code A:	9/25/2015
Cooperator:	Marty Brooks
Variety:	FM 2484 B2F
Time:	10:45 - 11:15 am
Temp (^{0}F):	78
% RH:	41%
Wind Speed (mph) & Direction	calm
GPS	FM 820, Coahoma, TX 79511
Row Spacing("):	40"
Plot width (rows)	4 (+2 row check between trts.)
Plot length	125 feet
% Open	70-75%
Plant Height (mean inches)	20-25"
Notes:	
Sprayer Information	Spider Sprayer
	11 gpa / 11002 Turbo Teejet
	32 psi
	4 mph

DAILY TEMPERATURES			
Date	Low	High	GDD 60
9/25/2015	69	88	18.5
9/26/2015	64	90	17
9/27/2015	62	88	15
9/28/2015	62	89	15.5
9/29/2015	61	88	14.5
9/30/2015	61	89	15
10/1/2015	72	94	23
10/2/2015	63	83	13
10/3/2015	61	83	12
10/4/2015	58	76	7
10/5/2015	61	76	8.5
10/6/2015	50	83	6.5
10/7/2015	68	85	16.5
10/8/2015	62	74	8
		Total	190
Rain			
9/26/2015	0.13		
9/27/2015	0.03		
10/8/2015	1.43		
Total:	1.6	inches	

Nolan Co. (Roscoe) Dryland 7 day

Plants were average height with 99 open bolls and very little top or lower regrowth. Two locations of the field were sprayed a green area on the south and a dryer area on the north. This was to get replicated data for science (STEM) students at Roscoe Independent School District.

- Slight differences were seen between Ginstar and Adios treatments, the use of crop oil concentrate appeared to improve defoliation. A Ginstar treatment without ethephon performed very poorly with 5% leaf drop and 90% green leaf in the greener cotton. The application of Ginstar alone to more desiccated cotton defoliated at 15%
- PPO products defoliated between 10 and 45% depending on the area in field. A treatment of Sharpen without Ethephon did not do as well in the green area as in the dry area.
- The Ethephon and Folex treatment was on par with both the Ginstar and PPO treatments
- Numerous comparisons with Gramoxone showed that the rates below 16 fl oz were inadequate and the drier area of the field responded with a higher defoliation percentage. Differences were very small with the use of Crop Oil compared to Non-Ionic Surfactant and with additions of Aim, AMS , or Diuron at 7 days after treatment.

Nolan Co. (Roscoe) Dryland 14 day

Plants were average height (24-30") for the area with 99% open bolls and very little top or lower regrowth. Two locations of the field were sprayed, a green area on the south and a dryer area on the north. This was to get replicated data for science (STEM) students at Roscoe Independent School District. Some differences were observed between green and dryer treated areas.

- The plots in the dryer area defoliated better for most treatments. Presumably, because plants were more senesced and ready to defoliate.
- Slight differences were seen between Ginstar and Adios treatments. The use of crop oil concentrate appeared to improve defoliation with both products in most plots. A Ginstar treatment without ethephon performed very poorly with 30% leaf drop and 60% green leaf in the greener cotton. Regrowth was very minimal with the Ginstar and Adios Treatments.
- PPO products defoliated between 50 and 75% depending on the area in field. As with the Ginstar treatments the dry block had a better defoliation response. Treatments with Sharpen and ETX scored better for defoliation but regrowth was greater with Sharpen. A treatment of Sharpen without ethephon performed well but regrowth averaged 60% and was the highest of the PPO's and was approaching the range of the Gramoxone treatments.
- The Ethephon and Folex treatment dropped in ranking from 7 days and had regrowth of 60%.
- Numerous comparisons with Gramoxone showed that the rates below 16 fl oz were inadequate in green areas of the field and probably should have been increased above 16 fl oz. As with the other products, the drier area of the field responded with a higher defoliation percentage but more regrowth. 4 and 8 fl oz of Gramoxone actually defoliated better than 60% in the dry area. Differences were very small with the use of Crop Oil compared to Non-Ionic Surfactant. The addition of AMS did not show an advantage but adding Aim and Diuron appeared to have improved performance and lessened regrowth.

Howard Co Dryland 7 day

The plants received some rain a few of weeks prior to defoliation and has started to regrow. Most treatments had a base line regrowth score of 30%.

- Addition of crop oil concentrate and Finish 6 Pro significantly improved the defoliation performance of the Ginstar treatments.
- PPO treatments did not perform as well as the others. Display scoring highest for defoliation and Sharpen the losest for regrowth.
- Folex and ethephon did surprisingly well on defoliation but regrowth will be an issue.
- The high Gramoxone treatment defoliated very well but has typical regrowth issues.
- The low rate of Gramoxone did not defoliate well as it had at other locations earlier this year.
- The "kitchen sink" mix with Ginstar and Finish performed well at this location.

Howard Co Dryland 14 day

The plants received some rain a few of weeks prior to defoliation and has started to regrow. Most treatments had a base line regrowth score of 30% at 7d. It was raised to 50% at 14 days. Over all conditions were somewhat difficult for defoliation.

- Addition of crop oil concentrate and Finish 6 Pro significantly improved the defoliation performance of the Ginstar treatments.
- PPO treatments did not perform as well as the others. ETX and Sharpen exhibited the best defoliation and Sharpen the lowest for regrowth.
- Folex and ethephon did surprisingly well on defoliation but regrowth was an issue.
- The high Gramoxone treatment defoliated very well but regrowth was an issue and spoiled my scale of 0-100%. It was a 120%.
- The low rate of Gramoxone did not defoliate well as it had at other locations earlier this year.
- The "kitchen sink" mix with Ginstar and Finish performed well at this location at 7d but fell behind at 14d.

Glasscock Co. Dryland 14 day

Plants were short, hardened off from weeks of hot dry weather, had leathery leaves, and open bolls.

- Many treatments performed poorly because of stressed conditions
- Boll openers were only needed at low rates or not at all because of crop condition and warm weather. No significant differences were observed between rates of ethephon.
- Ginstar treatments performed the best with the generic or mixture of SC formulations scoring lower for defoliation
- PPO treatments were disappointing with low percentages of defoliation. Sharpen without ethephon was the best PPO treatment in terms of defoliation and regrowth.
- The Folex and ethephon standard treatment only defoliated 10% and regrowth was stimulated but treatments that included Finish were much better.
- The higher rate, 16 fl oz of Gramoxone SL (2lb); treatments without ethephon had about 50% defoliation and proved effective and economical. However, this treatment had the highest regrowth. The 3 and 6 fl oz of Gramoxone SL (2lb) with ethephon did not work well.

October 2015

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Be careful with Diuron

Now that there are generics for Ginstar or the Dropp and Diuron mixture the price is reduced and it may be tempting to use higher rated for better performance. Remember that Diuron is a residual herbicide and there are potential plant back restrictions to sensitive crops.

End Notes

- 2010 to 2015 Harvest Aid Trials and Results for the Rolling Plains and Southern Rolling Plains can be found in the Agronomy Newsletters at http://sanangelo.tamu.edu/agronomy
- For more cotton harvest aid recommendations refer to the AgriLife publication: 2014 High Plains and Northern Rolling Plains Cotton Harvest-Aid Guide available at http://lubbock.tamu.edu
- **Value of Extension**: Survey results at the 2012 Glasscock County Cotton Field Day indicated that 51% of respondents were likely to change their cotton harvest aid treatments based on the result demonstration. The chemical cost of harvest aid treatments in trials ranged from $4 to $17 per acre making this an important economic decision that is helped by results and demonstrations.

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